

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

WETLAND WILDLIFE HABITAT MANAGEMENT

(Acre)

CODE 644

DEFINITION

Retaining, developing, or managing wetland habitat for wetland wildlife.

Application of this practice shall remove or reduce limiting factors in their order of significance, as indicated by results of the Wildlife Habitat Evaluation Procedure (WHEP).

PURPOSE

To maintain, develop, or improve habitat for waterfowl, fur bearers, and other wetland associated flora and fauna.

Application of this practice alone, or in combination with other supporting and facilitating practices, shall result in a conservation system that will enable the planning area to meet or exceed the minimum quality criteria for wildlife habitat established in Section III of the FOTG.

CONDITIONS WHERE PRACTICE APPLIES

On or adjacent to wetlands, rivers, lakes, and other water bodies where wetland associated wildlife habitat can be managed. This practice applies to natural wetlands and water bodies as well as wetlands that have been previously restored (657), enhanced (659), or created (658).

Identify species management goals and objectives. For the desired species, identify the types, amount, and distribution of habitat elements and the management actions necessary to achieve the management objectives. All planned manipulations of water and vegetation shall be documented in a management plan.

CRITERIA

General Criteria Applicable to All Purposes

The Tennessee Wildlife Habitat Evaluation Procedure (Section IV, FOTG Tools) for wetlands will be used to determine habitat limiting factors.

Native plants will be used whenever possible.

Sites containing hazardous waste will be cleaned or not managed under this standard.

Invasive, noxious, and nuisance plant species shall be controlled on the site.

Livestock shall be excluded from forested

wetlands. Grazing of other wetland areas (i.e., farmed wetland pastures) shall be limited to one grazing period annually, as prescribed in a grazing plan, in a manner that maintains nesting habitat and allows for adequate re-growth. Haying or mowing on non-forested wetland areas shall be limited to no more than one cutting annually between August 15 and October 1 to protect nesting habitat, allow fall re-growth, and maintain the desired plant succession stage.

Chemical control of undesirable, invasive, or noxious weeds shall be limited to “spot” treatments.

The landowner shall obtain all necessary local, state, and federal permits that apply.

Criteria Applicable to Forested Wetlands

For this standard, forested wetlands include (1) bottomland hardwoods and hardwood flats classified as “palustrine forested” under the Cowardin classification system; and (2) greentree reservoirs.

Forested wetlands shall be managed for wildlife by meeting the following minimum levels of habitat quality:

1. Timber management practices including thinning, timber stand improvement, and clearcutting shall conform to the wildlife criteria of the NRCS Forest Stand Improvement practice standard (Code 666).
2. Hardwood thinning shall not occur more frequently than once every five years.
3. Clearcuts shall not exceed ten acres.

4. Forest openings shall not exceed 10 percent of the forested wetland complex.
5. Where hard-mast trees are present, tree thinning operations shall ensure that a minimum component of mast-producing trees remains after harvest. The post-harvest percentage by species and volume should approximate the pre-harvest percentage.
6. A minimum score of 0.5 on the “Habitat Evaluation Procedure-Wetlands” in Section IV (Tools) of the Field Office Technical Guide shall be applicable following tree or shrub removal.
7. Greentree reservoirs shall be artificially impounded only during the tree dormancy period of December 1 to March 1 no more frequently than four years out of five in order to maintain tree growth and vigor.
8. Water Control Structures (578) shall have the capacity to drain greentree reservoirs within seven days following a ten-year storm event to protect from artificially long flood duration during the growing season. Water control structures shall have appropriate beaver exclusion devices installed, when necessary, to protect the forested habitat.
9. Tree removal shall be limited along stream corridors to protect travel lanes and stream wildlife.

Criteria Applicable to Non-Forested Wetlands

For this standard, non-forested wetlands include: (1) areas classified as “palustrine emergent” (marshes and wet meadows) and “scrub-shrub” (bogs and shrub swamps) wetlands under the Cowardin classification system; (2) moist soil management areas; (3) beaver ponds; and (4) fringe wetlands (shoreline areas of ponds and lakes).

1. Planned water level manipulations and water depths within shallow water wetlands shall be consistent with the NRCS Shallow Water Development and Management (646) practice standard.
2. A minimum of one acre of exposed mudflat or shallow water habitat must be available due to summer drawdown of fringe wetlands or beaver ponds.
3. Beaver ponds shall not be artificially de-watered before July 1. At least 50 percent of the beaver pond shall remain undrained to maintain habitat for aquatic species.
4. Woody invasion must be controlled by mechanical or chemical methods that can achieve desired results with the least environmental impact.
5. When controlling woody invasion, limit canopy removal to 25-50 percent per year outside of known breeding periods of reptiles and amphibians (e.g., bog turtle).

CONSIDERATIONS

Consider effects management will have on disease vectors such as mosquitoes.

Consider effects on fish and wildlife habitats that would be associated with the practice.

Consider effects of movement of dissolved substances on ground water and downstream surface waters.

Consider adding dead snags, tree trunks, or logs to provide structure and cover for wildlife and a carbon source for food chain support.

Consider the effects of water level draw downs on turtle mortality.

Consider removing low quality hardwoods, such as maple and elm, in a greentree reservoir to maximize mast-producing trees, including oaks, tupelo, and blackgum. Thinning to 75 percent canopy closure will provide better crown development and increased mast production.

Greentree reservoirs should be planned with flooding regimes consistent with the natural flood regimes of the area. Sites should be flooded and dewatered slowly to extend habitat conditions and avoid flushing nutrients and sediments.

The use of a Clemson leveler with riser or three-log drain through a beaver dam should be considered over manual breaks in the dam to provide more practical water management.

Consider sowing waterfowl food plants on exposed mudflats of fringe wetlands and beaver ponds. Suitable plants such as Japanese millet, browntop, or baldwin junglerice that have short growth cycles and midsummer planting dates should be broadcast without covering. If possible,

avoid flooding in fall until plants produce seed. Refer to job sheets or technical notes for seeding rates and cultural methods. When determining which species to plant, consider micro topography and variations in hydrology levels.

Consider buffer practices, such as Filter Strip (393) or Field Border (386), on adjacent uplands to protect wetland habitat from sediment or contaminants and provide ecosystem integrity. Terrestrial buffers at least 50 feet wide would be required to provide reptile and amphibian habitat.

Consider effects of management actions on compliance with state and federal hunting regulation (e.g., baiting).

Consider effects of management on non-target fish and wildlife species and threatened and endangered species.

Consider effects of livestock grazing on runoff, infiltration, and wetland vegetation. For mountain bogs, consider only light to moderate winter grazing.

Consider using artificial nesting structures designed for targeted species, when nesting habitat is lacking.

Consider the impact of elevated wildlife uses on adjacent lands (e.g., crop depredation).

Consider effect of volumes and rates of runoff, infiltration, evaporation, and transpiration on the water budget.

Consider effects on downstream flows or aquifers that would affect other water uses or users.

Consider adjacent wetlands or water bodies that contribute to wetland system complexity and diversity and maximize use of the site by wetland-associated wildlife.

PLANS AND SPECIFICATIONS

Document how habitat needs will be provided for the desired kinds of wildlife: Required depth of water during the different seasons; types and sizes of structures required; and desired native plant species and the means of establishing and maintaining them. Specific information may be provided using appropriate job sheets or written documentation in the conservation plan.

OPERATION AND MAINTENANCE

A plan for operation and maintenance at a minimum should include monitoring and management of structural and vegetative measures and the following:

- Biological control of undesirable plant species and pests (e.g., using predator or parasitic species) shall be implemented, where available and feasible.
- Added water depth and duration may be utilized as a method to control unwanted vegetation (e.g., reed canarygrass). Refer to the Shallow Water Development and Management (646) standard.

GLOSSARY

1. Greentree Reservoir – A forested wetland that has been artificially impounded during winter months for waterfowl.
2. Moist Soil Management Area – A seasonally flooded impoundment consisting of native herbaceous vegetation.

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